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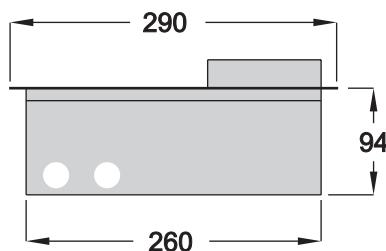
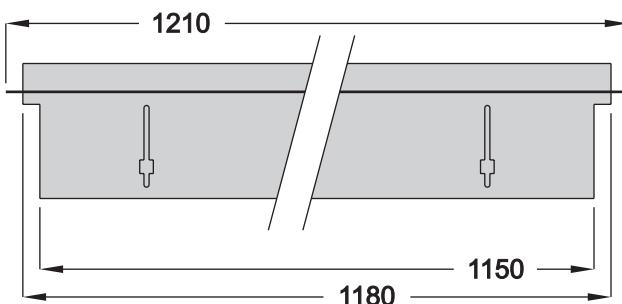
Cyclo O4 Wallwasher



user manual

Martin

Measurements are in millimeters



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INTRODUCTION

Thank you for selecting the Martin Cyclo 04 Wallwasher. The Cyclo Series is a range of controllable, fluorescent color changers. These fixtures are designed to be used for cove lighting, perimeter lighting, light walls, behind semi-transparent materials, or any place where room is restricted.

The Cyclo 04 Wallwasher contains dimmable red, green, blue and white tubes.

In order to be DMX controlled, the Cyclo 04 Wallwasher fixtures require the Martin 516 DMX to 0-10 V Converter. The 516 Converter converts DMX to 0-10 V analog output. Additional Cyclos can be daisy-chained for synchronous dimming. A single 516 Controller can control 4-8 Cyclo groups individually, each group consisting of one to ten of the same Cyclo model wired in series (the number of groups depends on the model of Cyclo that is installed). The member fixtures in each group will react similarly when controlled.

Cyclo 04 Wallwasher control and power-cables are through-wired for easy installation.

The Cyclo series offers:

- Controllable RGB color-mixing and/or color temperature
- Bright output
- Precise asymmetrical light distribution

Note: *It is important to read this manual through before you attempt to install this product.*

SAFETY INFORMATION

Warning! *This product is for professional use only. It is not for household use.*

These products present risks of lethal or severe injury due to fire and heat, electric shock and falls. **Read this manual** before powering or installing these fixtures, follow the safety precautions listed below and observe all warnings in this manual and on the fixtures. If you have questions about how

to operate these fixtures safely, please contact your Martin dealer or call the Martin 24-hour service hotline at +45 70 200 201.

Protection from electric shock

- Disconnect the fixtures from AC power before removing or installing a lamp, fuses, or any part, and when not in use.
- Always ground (earth) the fixtures electrically.
- Use only a source of AC power that complies with local building and electrical codes and has both overload and ground-fault protection.
- Do not expose the fixtures to rain or moisture.
- Refer all service to a Martin service technician.

Protection from burns and fire

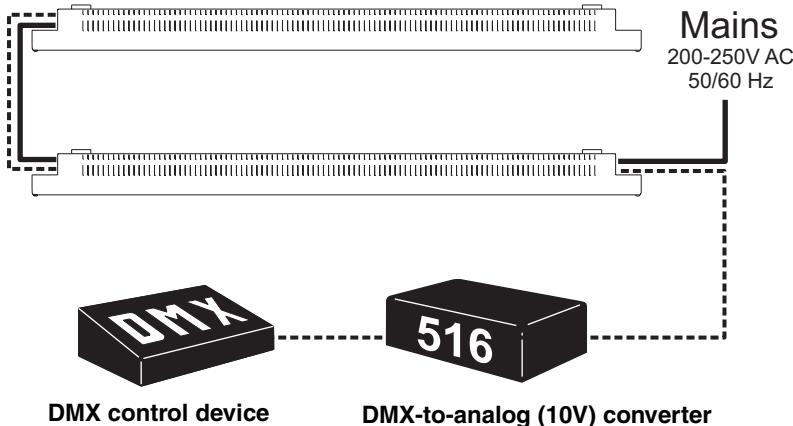
- Provide a minimum clearance of 0.1 meters (4 inches) around the fixture.
- Do not modify the fixture or install other than genuine Martin parts.
- Do not operate the fixture if the ambient temperature (Ta) exceeds 40° C (104° F).

Protection from injury due to falls

- Verify that all external covers and rigging hardware are securely fastened
- Block access below the work area whenever installing or removing the fixture.

INSTALLATION

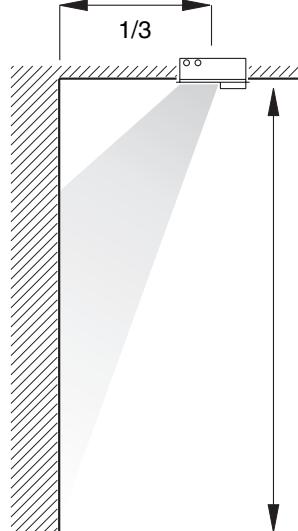
This section describes in general terms how to install the fixture and connect it to AC and dimmer power. These procedures shall be performed by qualified professionals.



Fixture Location

The fixture can be installed in a ceiling space of 1200 x 275 mm (+/- 15 mm). In US/Imperial measurements this is 47 x 11 in. (+/- 0.5 in.). The installation space should have a depth of at least 120 mm (4.7 in.)

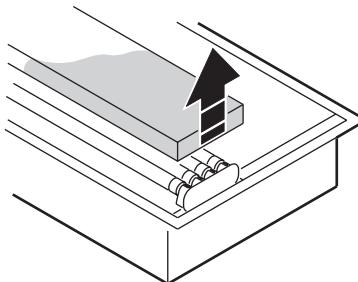
The fixture should be installed a distance away from the wall that is 1/3rd of the height of the wall.



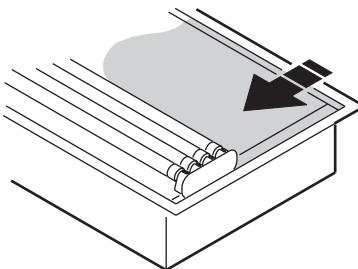
INSTALLING THE FIXTURE

To install the fixture:

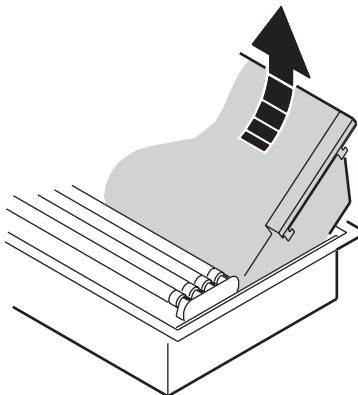
- 1 Pull the tube cover off.



- 2 Slide the reflector towards the tubes to unlock it.

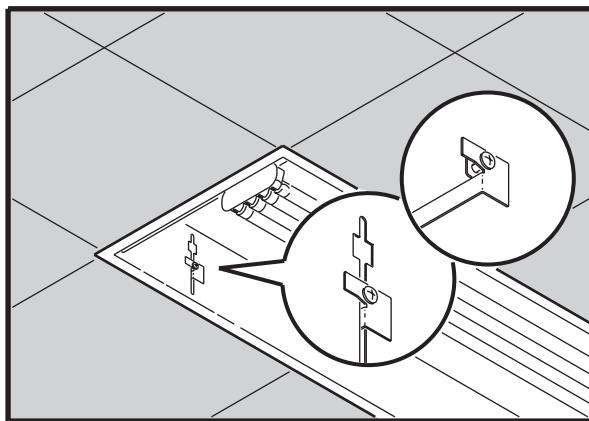


- 3 Pull the reflector out.



- 4 Insert the fixture into the ceiling.

5 Four metal stays that hold the product in position are provided. Insert a stay into each of the four holes on the sides of the fixture and screw it into place.:



6 Connect the AC power and dimmer control wiring (as described in the following sections) before replacing the reflector or tube cover.

AC POWER

Maximum power usage data for the Cyclo 04 Wallwasher is provided in “Power” on page 12.

You can power Cyclo 04 Wallwasher fixtures by wiring them in series. The internal wiring of the fixtures carries AC power through the fixture. Holes are supplied at both ends for input and output cables.

Warning: *In the Cyclo series fixtures incorporate a single electronic ballast per tube. Each of these “leaks” around 0,2 til 1 mA of power. Because of this we recommend connecting a maximum of 30 electronic ballasts (or tubes) per phase on a 30mA HPFI circuit breaker.*

A normal 30 mA HPFI circuit breaker normally trips because of a current fault or leakage of approximately 20mA. It is important that the installation is carried out correctly in order to avoid unintentional tripping of the circuit breaker.

Many installations use common neutral leads in branch circuit distribution boxes. It is important that the neutral lead in the cable is connected to the same HPFI circuit breaker, that it is not connected to the neutral leads from other HPFI circuit breakers. The neutral lead must be only associated with that

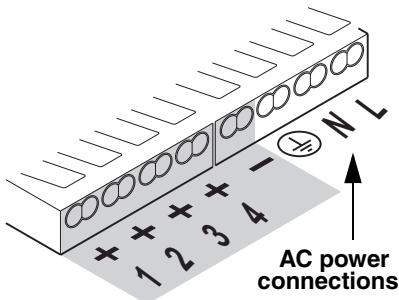
specific circuit breaker. Additionally it is important that the fixtures are connected correctly to the ground (earth) to ensure that the power leakage is able to run off.

The cable for AC power is passed through one of the two 5 mm holes at the end of the fixture. These are sealed with plastic and you will need to break a hole in one of them.

A clamp connector can be found at each end of the fixture. One is used to supply power and dimmer control to the fixture and the other is used to send power and dimmer control onwards to other fixtures in a series. The number of terminals present on each clamp connector is dependent on the Cyclo model.

Use the three terminals *not* shaded in grey to connect AC power - L live, or positive), N (neutral) and ground (or earth).

Be sure to refer and comply with local standards. Some common AC cable configurations are:



Wire (EU)	Wire (US)	Pin	Marking
brown	black	live	“L”
blue	white	neutral	“N”
yellow/green	green	ground	$\underline{\underline{L}}$

If the fixture is being wired in series with other Cyclo 04 Wallwasher fixtures of the same type, perform these steps at the other end of the fixture to connect it to the next fixture.

DIMMER CONTROL FROM A 516-II DMX TO 0-10 V CONVERTER

Note: *If you apply power to a Cyclo 04 Wallwasher fixture that is not connected to a dimmer then it will operate at full power.*

The 516-II DMX to 0-10 V Converter has 16 analog outputs for connecting 0-10 V analog devices. For independent control, a Cyclo 04 Wallwasher requires four outputs.

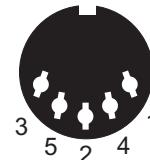
A maximum of 10 Cyclos (ballasts) of the same model can be wired in series to the same analog output/s on the 516-II DMX to 0-10 V Converter. Each Cyclo in the series will mimic the behavior of the others. Do not wire different Cyclo models in series to the same analog outputs.

This means that a single 516-II DMX to 0-10 V Converter can provide independent control of up to 4 groups of 10 Cyclo 04 Wallwashers.

Each output on the 516-II DMX to 0-10 V Converter is connected to both a 5-pin DIN socket and the 25-pin D-SUB socket. For the purposes of wiring, the pin configuration can be found on the rear panel of the 516 controller.

Wiring the 5-pin DIN connector

Use a 5-pin DIN connector to connect the controller to a series of one of more Cyclo 04 Wallwashers. (The controller has 4 5-pin DIN outputs enabling control of up to four parallel series of Cyclo fixtures.)



Always connect the ground wire to pin 2, and control leads to the other pins (between 2-4 depending on the number of tubes in the Cyclo that is being connected). The pin number of each output is shown on the rear panel. Make a note of which colored leads are connected to which channels as well as which colored wire is the ground wire.

Note: *Connections can be tested without a controller by setting all pins on the converter's DIP-switch to the off position and then applying power to the converter and the devices.*

Connecting the dimmer control cable to a Cyclo 04 Wallwisher fixture

The cable for dimmer control is passed through one of the two 5 mm holes at the end of the fixture. These are sealed with plastic and you will need to break a hole in one of the them.

A clamp connector can be found at each end of the fixture. One is used to supply power and dimmer control to the fixture and the other is used to send power and dimmer control onwards to other fixtures in a series. The number of terminals present on each clamp connector is dependent on the Cyclo model.

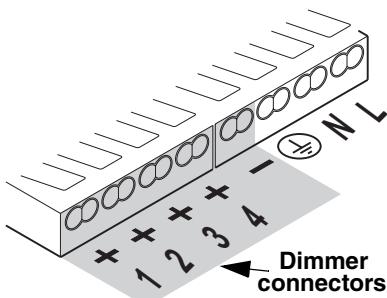
Use the numbered terminals to connect dimmer control. (Note that there are fewer connectors on Cyclo models with fewer than four tubes.) Connect the ground (earth) lead to the - terminal. Connect the other leads to the appropriate connectors. Notes that there are two connectors at each position and that you can use either one of these.

The internal wiring in the fixture carries the dimmer control through the fixture. Holes are supplied at both ends for input and output cables. If the fixture is being wired in series with other Cyclo fixtures of the same type, perform these steps at the other end of the fixture to connect dimmer control to the next fixture.

Note:

You can simultaneously control dimming on multiple Cyclo fixtures of the same type by wiring them in series. However, each analog output from the 516 Converter supplies 20mA. This means that a maximum of 10 Cyclos (ballasts) in series can be controlled from each 516 Converter channel. Each ballast requires 1.5-2 mA.

If you are connecting multiple Cyclo fixtures in series that the length and diameter of the control (dimmer) cabling must be dimensioned so that the voltage drop over the cabling is less than 0.5 volts.



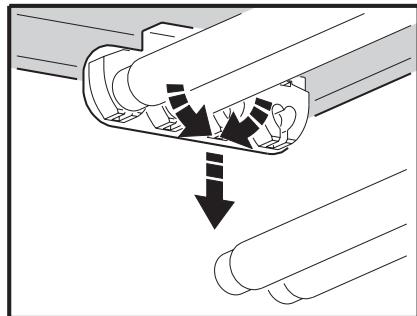
FLUORESCENT TUBES

Removing tubes

To remove a tube, pull the lamp cover off, grasp both ends of the tube and rotate it until it you are able to lift an end free.

You may need to remove the outside tubes in order to access tubes in the middle of the mount.

It is advisable to replace all the tubes simultaneously.

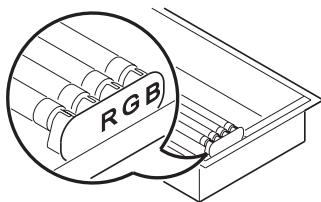


Burning in new tubes

In order to obtain the full tube life time, new fluorescent tubes must be burned in for 100 hundred hours at full power (10 volts).

Identifying tube positions

Tube positions are identified in the Cyclo 04 Wallwasher as follows:

Marking in fixture	Marking on tube	Color	Reference illustration
R	OSRAM 28/60	Red	
G	OSRAM 28/66	Green	
B	OSRAM 28/67	Blue	
None	OSRAM 28/827 OSRAM 28/840 OSRAM 28/860	2700K white 4000K white 6000K white	

CLEANING

We recommend that you clean the fixture with a damp cloth.

SPECIFICATIONS

PHYSICAL

L x W x H 1210 x 290 x 94 mm (47.6 x 11.4 x 3.7 in.)
Weight 9 kg (20 lbs)

INSTALLATION

Installation space (L x W) 1200 x 275 mm +/-15 mm (47 x 11 in. +/-0.5 in.)
Installation space depth 120 mm (4.7 in.)
Minimum free space around fixture when installed 25 mm (1 inch)

SOURCE

Approved lamp type OSRAM T5 FH 28 watt tubes
Light source T5 tubes (3x28W)

POWER

AC power 198 V - 254 V, 50 / 60 Hz
Dimmer control 1-10V control
Maximum power and current @ 230 V / 50 Hz 0.56 A / 128 watts

THERMAL

Maximum ambient temperature (Ta) 40° C (104° F)

DYNAMIC EFFECTS

Dimmable tubes Red, green, blue and white
Independent dimming of each tube via 516 Converter

CONTROL (VIA 516 CONVERTER)

Number of independently controllable dimming channels 16
Channels required per independently controlled Cyclo 04 Wallwasher group 4
Number of Cyclos per group (fixtures wired in series) 1-10 (of the same model)

ORDERING INFORMATION

Cyclo 04 Wallwasher P/N 90550030

INCLUDED ITEMS

Lamp OSRAM T5 FH28W/60 (red)
Lamp OSRAM T5 FH 28W/66 (green)
Lamp OSRAM T5 FH28W/67 (blue)
Lamp OSRAM T5 FH28W/840 (white)

ACCESSORIES

Martin 516 II DMX to 0-10V Converter P/N 90758225



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